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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,244	11/14/2003	Michael W. Shapiro	03226.345001; SUN040246	6960
32615	7590	02/08/2007	EXAMINER	
OSHA LIANG L.L.P./SUN 1221 MCKINNEY, SUITE 2800 HOUSTON, TX 77010			YAARY, MICHAEL D	
			ART UNIT	PAPER NUMBER
			2193	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/714,244	<b>Applicant(s)</b> SHAPIRO, MICHAEL W.	
	<b>Examiner</b> Michael Yaary	<b>Art Unit</b> 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/25/2004</u> | 6) <input type="checkbox"/> Other: _____  |

***Detailed Action***

1. Claims 1-25 are pending in the application.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 3-9, 11, 13-17, 19, 21, and 23-25 are rejected under U.S.C. 101

because the claimed invention is directed to non-statutory subject matter.

**As to claims 1, 3-9, and 11**, the claims appear to be functional descriptive material, software per se. Thus being ineligible for protection.

**As to claims 13-17 and 19**, the claims are directed to a "data structure," which appears to be functional descriptive material, software per se. Thus being ineligible for protection.

**As to claims 1, 3-9, 11, 13-17, 21, and 23-25**, the claims are directed to a method, data structure, and system producing no useful and tangible result. Thus being ineligible for protection.

The claims are directed to the method, data structure, and system, in which trace object code is obtained from trace source code, and thus using components of the object code in the conversion to an object file. This system and process yields no useful and tangible result.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 4, 13, 21, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al. (hereafter O'Brien)(US Pub. 2002/0095660) in view of Berry et al. (hereafter Berry)(US Pat. 6,678,883).

5. **Regarding claim 1**, O'Brien discloses a method for formatting an object file comprising (abstract, lines 11-14 and [0002], lines 1-4):

Generating a trace object code from trace source code ([0041], lines 4-7); and

Processing component information of the trace object code to generate the object file ([0051], lines 1-6).

6. O'Brien does not disclose the object file comprises a linear sequence of bytes comprising a file header, a plurality of section headers, and a plurality of section data entries.

However, Berry discloses the object file comprises a linear sequence of bytes comprising a file header (column 13, line 59- column 14, line 6), a plurality of section headers (column 14, lines 33-34 and section header 1004 in figure 10A), and a plurality of section data entries (column 14, lines 34-37).

7. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of O'Brien by including an object file comprising a file header, section headers, and data entries, as taught by Berry, for the benefit of successfully being able to produce object files from source files in a software analysis system, as these parts of the object file are integral components that make up an object file.

8. **Regarding claim 13**, O'Brien discloses a data structure defining an object file comprising ([0042], lines 30-32 and data structures 76 of figure 2):

An object file generated by processing component information of a trace object code ([0051], lines 1-6).

9. O'Brien does not disclose that the data structure comprises:

A file header;

A list of section headers appended to the file header; and

A plurality of section data, wherein the section data comprises loadable section data and non-loadable-section data,

Wherein, the object file comprises the file header, the list of section headers and the plurality of section data.

However, Berry discloses that the data structure comprises:

A file header (column 13, line 59- column 14, line 6);

A list of section headers appended to the file header (column 14, lines 33-34 and section header 1004 in figure 10A); and

A plurality of section data (column 14, lines 34-37), wherein the section data comprises loadable section data (column 14, lines 62-65) and non-loadable-section data (Inherent in column 14, lines 62-65 as the section data of a data structure also contains non-loadable data.),

Wherein, the object file comprises the file header, the list of section headers and the plurality of section data (Column 13, line 59-column 14, line 6; column 14, lines 33-37; and figure 10A disclose that all these components are what comprise the file.)

10. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of O'Brien by including a data structure that is part of an object file that comprises a file header, section headers, and data entries, as taught by Berry, for the benefit of successfully being able to produce object files from source files in a software analysis system, as these parts of the object file are integral components that make up an object file.

11. **Regarding claim 21**, O'Brien discloses a computer system for formatting an object file comprising (abstract, lines 11-14 and [0002], lines 1-4):

A processor (control processor 134 in figure 6);

A memory (control memory 136 in figure 6);

A storage device (database 65 in figure 3); and

Software instructions stored in the memory for enabling the computer system to:

Generate a trace object code from trace source code ([0041], lines 4-7);

and

Process component information of the trace object code to generate the object file ([0051], lines 1-6).

12. O'Brien does not disclose the object file comprises a linear sequence of bytes comprising a file header, a plurality of section headers, and a plurality of section data entries.

However, Berry discloses the object file comprises a linear sequence of bytes comprising a file header (column 13, line 59- column 14, line 6), a plurality of section headers (column 14, lines 33-34 and section header 1004 in figure 10A), and a plurality of section data entries (column 14, lines 34-37).

13. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of O'Brien by including an object file comprising a file header, section headers, and data entries, as taught by Berry, for the benefit of successfully being able to produce object files from source files in a software analysis system, as these parts of the object file are integral components that make up an object file.

14. **Regarding claims 3 and 24**, O'Brien further discloses saving the object file in a persistent data store ([0042], lines 2-4).

15. **Regarding claims 4 and 25**, O'Brien further discloses parsing object code to obtain component information ([0050], lines 1-4).

16. Claims 2, 5-12, 14-20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien and Berry as applied to claim 1 above, and further in view of (Murayama, John; "Performance Profiling Using TNF"; [Online]; <http://developers.sun.com/solaris/articles/tnf.html>, July 2001)(hereafter Murayama).

17. **Regarding claims 2 and 23**, O'Brien and Berry do not disclose transferring a tracing framework enabling using the object file.

However, Murayama discloses transferring a tracing framework enabling using the object file (Page 5, [0002], lines 1-5).

18. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of O'Brien and Berry by transferring the enabled tracing framework and enabling tracing in a running program, as taught by Murayama, for the benefit of effectively performing tracing actions in an instrumented program.



19. **Regarding claim 5**, O'Brien and Berry do not disclose at least one probe description comprising an optional predicate and an action.

However, Murayama discloses at least one probe description comprising an optional predicate and an action (Page 1, [0005], lines 2-5).

20. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of O'Brien and Berry by including probes to return particular values, as taught by Murayama, for the benefit of specifying argument values for the probe trace to record and successfully trace the execution of an application program.

21. **Regarding claims 6-12,14-19, 20, and 22**, O'Brien does not disclose dividing section data representing component information into loadable and unloadable data; encoding section data required by the tracing framework prior to other section data; assigning a unique identifier for each section header in the plurality of section headers; associating each section header in the plurality of section headers with a data element, wherein the data element defines a data type of the section referenced by each section header;

However, Berry discloses dividing section data representing component information into loadable (column 14, lines 62-65) and unloadable data (Inherent in column 14, lines 62-65 as the section data of a data structure also contains non-

loadable data.); encoding section data required by the tracing framework prior to other section data (Column 15, lines 4-7 disclose correlating data with addresses in performance trace data, thus encoding, translating the trace data first.); assigning a unique identifier for each section header in the plurality of section headers (column 14, line 66-column 15, line 7); and associating each section header in the plurality of section headers with a data element, wherein the data element defines a data type of the section referenced by each section header (column 14, lines 7-11).

22. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of O'Brien by dividing section data, encoding section data, assigning an identifier, and associating sections with data elements, as taught by Berry, for the benefit of successfully being able to produce object files from source files in a trace software analysis system.

23. O'Brien and Berry do not disclose defining a particular section type to refer to the enabling of at least one probe, wherein an arbitrary number of the particular section type appear in the object file.

However, Murayama discloses defining a particular section type to refer to the enabling of at least one probe (Page 1, [0005], lines 2-5), wherein an arbitrary number of the particular section type appear in the object file (page 3, [0001], lines 1-12).

24. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of O'Brien and Berry by including probes to return particular values and define particular sections, as taught by Murayama, for the benefit of specifying argument values for the probe trace to record and successfully trace the execution of an application program.

### ***Conclusions***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Yaary whose telephone number is (571) 270-1249. The examiner can normally be reached on Monday-Friday, 8:00 a.m - 5:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2193

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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